

A postdoc's experience with VIGRE at UCLA

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UCLA has many programs associated with VIGRE that I was not personally involved with (e.g., bridge courses between lower- and upper-division and between undergraduate and graduate, summer REUs) or that I was only part of for a short time, so I won't discuss them here.

The VIGRE initiatives that I have been most involved with at UCLA are the "graduate participating seminars", which are listed as Math 296 in the course catalog. These courses typically involve graduate students, postdocs, and permanent faculty and can last from one term to indefinitely. This description makes them sound like normal seminar series! But many of these are somewhere between a traditional seminar and a traditional course.

For example, this quarter (spring 2002) I am running one where we are going through a mid-level graduate text on Galois cohomology. I designed the course outline, and the students — mostly in their second and third years — are doing all of the lecturing. For nearly all of them, this is their first time giving a talk on any material of this level of sophistication. Before they speak, they meet with me to discuss what results they need to cover, etc. I in turn consulted with my teaching mentor about the design of the course and continue to talk with him about various other aspects (e.g., course handouts written to address specific student questions). There are 9 graduate students enrolled, and each talk is typically also attended by a couple more students, two permanent faculty, and myself. Similar courses are also occurring this term on toric varieties (going through Fulton's book), local fields, ...

In a somewhat more traditional vein, my research advisor has organized an ongoing 296 since fall 2001 to present Voevodsky's recent proof of Milnor's conjecture. Again, there is a distinct arc of material, with a beginning and a destination. Because of the more advanced subject matter (and greater sophistication required because the results are scattered across various research papers and several books), roughly 2/3rds of the lecturing is being done by postdocs and 1/3rd by grad students. Although only 1 student is enrolled, 4 regularly attend, as well as 5 postdocs (3 of which are VIGREs), and 3 permanent faculty.

These courses — and the requirement that graduate students must take two of them in order to graduate — predate VIGRE. But before VIGRE, these courses were somehow just facades and not at all of the type I have just described. With VIGRE, the department has pushed faculty to organize 296s of this type and encouraged them with a 1/6th course release. Here are the numbers:

	before VIGRE (approximate)	this quarter
number of 296s	12	21
total number of students enrolled	13	61

The fact that there are 5 postdocs attending the seminar described above is a reflection of the large number of postdocs at UCLA: there are 64 permanent faculty and 26 postdocs (6 of which are VIGRE).

A major benefit of VIGRE for me was the \$2500 per year for travel and expenses. As postdocs, we don't get startup packages, most of us do not have NSF grants, and UCLA has no departmental travel money for postdocs. This money gave me the freedom to attend many more conferences than I would have otherwise (e.g., I co-organized a special session at the AMS national meeting in January 2002 and I went to conferences in Baton Rouge; Duisburg, Germany; and Oberwolfach). Of course, one could always use more.

The other direct benefit of VIGRE is the course release. The usual postdoc load at UCLA is 2-1-1 and with VIGRE it is 1-1-1. During my first year at UCLA (before the department was awarded the VIGRE grant), I found that simultaneously teaching two different and entirely new courses left me very little time for research. Oddly, my research production seems to be greatest when I am teaching one course rather than none at all, so the VIGRE setup is ideal for me. Consequently, when Jean-Pierre Serre visited UCLA in winter 2001, I was in a position to take advantage of it. Now, he, my research advisor (Alexander Merkurjev), and I are writing a book to be published by the AMS. Since you can hardly ask for a wider spread in seniority amongst the authors, this seems like an ideal example of vertical integration.

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